

narrowest when my Eye was furthest from the direct Light, and therefore seemed to pass between the Light of that fringe and the edge of the Knife, and that which passed nearest the edge to be most bent, though not all of it.

O B S. VI.

I placed another Knife by this so that their edges might be parallel and look towards one another, and that the beam of Light might fall upon both the Knives, and some part of it pass between their edges. And when the distance of their edges was about the 400th part of an Inch the stream parted in the middle, and left a shadow between the two parts. This shadow was so black and dark that all the Light which passed between the Knives seemed to be bent, and turned aside to the one hand or to the other. And as the Knives still approached one another the shadow grew broader, and the streams shorter at their inward ends which were next the shadow, until upon the contact of the Knives the whole Light vanished leaving its place to the shadow.

And hence I gather that the Light which is least bent, and goes to the inward ends of the streams, passes by the edges of the Knives at the greatest distance, and this distance when the shadow begins to appear between the streams is about the eight-hundredth part of an Inch. And the Light which passes by the edges of the Knives at distances still less and less is more and more bent, and goes to those parts of the streams which are further and further from the direct Light, because
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when the Knives approach one another till they touch, those parts of the streams vanish last which are furthest from the direct Light.

O B S. VII.

In the fifth Observation the fringes did not appear, but by reason of the breadth of the Hole in the Window became so broad as to run into one another, and by joining make one continued Light in the beginning of the streams. But in the sixth, as the Knives approached one another, a little before the shadow appeared between the two streams, the fringes began to appear on the inner ends of the streams on either side of the direct Light, three on one side made by the edge of one Knife, and three on the other side made by the edge of the other Knife. They were distinctest when the Knives were placed at the greatest distance from the Hole in the Window, and still became more distinct by making the Hole less, insomuch that I could sometimes see a faint lineament of a fourth fringe beyond the three above-mentioned. And as the Knives continually approached one another, the fringes grew distincter and larger until they vanished. The outmost fringe vanished first, and the middlemost next, and the innermost last. And after they were all vanished, and the line of Light which was in the middle between them was grown very broad, enlarging it self on both sides into the streams of Light described in the fifth Observation, the above-mentioned shadow began to appear in the middle of this line, and divide it along the middle into two lines of Light, and increased until the whole

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